Test Tools

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Outline

- Automated Testing
- Automated Tools
- Component Based Testing
- Component Based Tools
- Test Driver

Automated Testing

- Goal
  - Eventually decrease test-hours
  - Perform repeatable tests
  - Stream-line regression testing
  - Perform quick-look tests

Automated Tools

- Rational Robot
  - (4) Systems dedicated to test tools
- Scripts manually generated from Test Procedures
  - Dependence on GUI
  - Scripts generated to minimize GUI change impacts

Automated Tools - Status

- Scripts generated from Beta 5
- Scripts updated from post Beta 5 releases
  - GUI changes taken into account
  - Beta 5.1 procedures
    - NITF
    - Graphical Route
      - serpentine, simple route, multi-path route, 80-point route and multiple routes
- Script development and execution
  - Target high-risk test areas first
  - Target lower-risk areas as time permits

Component Based Testing

- Goals
  - Limit testing to only new and modified functionality
  - Limit regression testing
  - Collect Component Based Metrics

- McCabe Tool
  - Provides mechanism to instrument VC++ and VB
  - Provides a "Battle Map"
  - Provides component based metrics
  - Provides "code" test coverage
    - Identifies the part of the code the procedures affect
    - Identifies how well the procedures test the code

- Beta 5 being base-lined
  - VC++ code being instrumented
  - VB code being instrumented
  - Limited battle maps generated
- MUST understand how to compile JMPS
  - Not a simple process
  - Not fully documented
  - Working with NGIT on problem
- Execute all test procedures on compiled code to generate test coverage
- Evaluate Beta 5 against newer build
  - Beta 5.2 or JC1 0.1
- Potentially make tool available to other organizations to collect data

- Goals
  - Needed to evaluate functionality only accessible by a UPC

- Portions of Point Export Tool
- JC1 Requirements
  - Depends on test driver availability from NGIT
  - Being evaluated

Test Driver *- Status*

- Test driver development on schedule
- Prototype available end of August
  - Point Export Tool evaluation
- JC1 prototype test driver available October